

REMARKS

Claims 1-14 are pending in the application. Claims 1-14 are rejected.

Base Claims 1, 7, and 11 are now amended to further emphasize and make clear the present invention in light of the Office Action at hand. No new matter is introduced. Acceptance is respectfully requested.

Regarding Rejections under 35 U.S.C. § 103(a)

Claims 1-6 have been rejected under 35 U.S.C. § 103 as being unpatentable over Li et al. (U.S. Patent No. 6,591,266) in view of Bates et al. (U.S. Patent No. 6,275,858) in further view of Labounty et al. (U.S. Patent No. 6,871,211).

The present invention is directed to a method for providing a requestor with access to dynamic data via quasi-static data requests. To accomplish this, the present invention recognizes that certain web pages (classified as 'dynamic' in the prior art) can be effectively treated as static pages. In particular, the present invention defines these certain web pages as web pages having dynamic elements that change infrequently, each at a rate that is slow compared to other dynamic data. A web page containing infrequently changing dynamic data is generated as a static page and stored. Upon receiving a request for the web page, the stored page is immediately retrieved without the necessity of an operational database query or the invocation of an executable. This serves to reduce the bottlenecks formed when data is requested by removing the need for redundant calls to an operational database.

Li criticizes and discourages the periodic refreshing of cached pages. Instead, Li focuses attention on synchronizing the data stored as web pages in cache with the corresponding data stored in a database. In particular, Li creates and maintains an association (or mapping) between the URL of the requested web page and the data queries/external source operations made in generating the web page. A content change monitoring component monitors and detects changes to data in the database (or external source) when a data change is detected, the content change monitoring component determines from the associations (mapping) which queries/operations and ultimately which web page is affected by the changed data. See column 4, lines 34-57 and column 8, lines 36-63.

Bates discloses a refresh manager that enables intelligent, automated refreshing for individual client user selected Internet web pages. The page data structure includes a universal

resource locator (URL), a refresh interval, a weekend interval, a last time refreshed, a time of day array, a cycling redundancy check (CRC) or hash value, an auto refresh on/off, and a last time accessed. The refresh interval defines a time interval to refresh a page in cache when this much time has passed. The weekend interval defines a refresh time interval to refresh a page in cache that is used only on weekends. A time of day array is a collection of refresh intervals such as one for each hour which is used to refresh a page during a particular hour of the day. The CRC or hash value is an integer value used to determine if a page has changed, for example determined by adding together all the bytes in a page. See Bates col. 4, lines 19-40.

Labounty discloses a medical telemetry system for relaying physiologic data from a patient to a remote computer used by a clinician in real-time or near real-time. A clinician operating a workstation connects to a web server, loading a Web page containing static fields such as patient name and room number. The web page also contains a window for showing real-time patient information, such as an EKG. Sensors attached to a patient transmit data to a waveform server. An applet in the Web page communicates with the waveform server to retrieve the patient data and display it in the window. Physiologic patient data is updated continuously. See Labounty col. 7, lines 40-59.

Li, Bates and Labounty individually or in any combination do not imply or suggest periodic intervals “defined with respect to an actual rate of change of the dynamic element with respect to other dynamic data” as is now recited in base Claim 1. Bates describes a method of refreshing a web page that heuristically determines a refresh rate based on history. See Bates col. 3, lines 54-57. The software determines whether a web page has changed by comparing a CRC for a refreshed web page with a stored CRC value from a previously accessed version of that web page. See Bates col. 5, lines 30-40. Based on this determination, the software application changes the weekend interval, the interval associated with the time of day slot, or the refresh interval. See Bates col. 7, lines 5-8, lines 21-24, and lines 41-43. Alternatively, a user can manually override the generated refresh schedule. See Bates col. 3, lines 58-59. In either case, the software application has no information regarding the times at which a web page is actually changed at the source; the intervals are either iteratively found through successive refreshes of the page or the intervals are set by a user. Therefore, in both cases the refresh rate is estimated. Additionally, neither Li nor Labounty teach the use of defined intervals. Thus, neither Li nor Labounty imply or suggest the claimed “intervals defined with respect to an actual rate of change of a dynamic element with respect to other dynamic data.”

In contrast, the method claimed in the present invention generates a web page at a predefined interval that is determined using the actual rate of change of the dynamic elements as compared to other dynamic data. This is possible because the scheduler component is in connectivity with the executable code; management of the scheduler component and the executable code happens in tandem on the server side. See Specification pages 37-38 as originally filed, in particular Specification page 37, lines 18-26. No new matter is introduced.

Thus, Li, Bates and Labounty do not imply or suggest intervals “defined with respect to an actual rate of change of the dynamic element with respect to other dynamic data” as is described in base Claim 1. Furthermore, no combination of the cited references would suggest the claimed limitation.

Additionally, it would not have been obvious to combine the teachings of Li with the teachings of Bates because Bates is not in the same field of endeavor as either Li or the present invention. Bates does not teach executable code that generates a copy of web pages. Rather, it teaches a method for “automated refreshing of internet web pages.” This is a fundamental distinction, reflecting two completely different technologies. Refreshing a web page is known in the art as a client technology; in Bates, the Refresh Manager resides on the same computer system and operates in conjunction with a web browser (See Bates, col. 3, lines 5-7, Fig. 1). Generating a web page is known in the art as a server technology; the scheduler component of the present invention resides on the server along with the executable code that generates a web page (See Spec., page 4, lines 9-21, Fig. 16).

Although both client and server technologies are components of Internet communications, they are in disparate fields of endeavor. The present invention eliminates the majority of requests to the operational database. The invention of Bates is concerned with eliminating requests to the web server. The present invention reduces congestion on the server whereas Bates reduces congestion on the network. Bates could be wholly implemented independently of the present invention. Further, where Li discounts and teaches away from periodic generating of cached web pages (column 4, lines 34-57), it would not have been obvious to combine Li with Bates' method/apparatus for automated refreshing of web pages.

Thus, the § 103 rejection of base Claim 1 in view of Li, Bates and Labounty is believed to be overcome. Dependent Claims 2-6 inherit the above quoted and argued claim limitation. Withdrawal of this § 103 rejection is respectfully requested.

Applicants interpret paragraph 3 of the Office Action at hand to intend that Claims 7-8, 10-12 and 14 have been rejected under § 103(a) as being unpatentable over Bates et al. (U.S. Patent No. 6,275,858) in view of Labounty (U.S. Patent No. 6,871,211). Further, Claims 9 and 13 have been rejected under § 103(a) as being unpatentable over Bates et al. (U.S. Patent No. 6,275,858) in view of Helbig (U.S. Patent Application Publication 2002/0116257) with and without Labounty (U.S. Patent No. 6,871,211).

As argued above, Bates does not imply or suggest “a scheduler periodically invoking an executable to generate a quasi-static copy of the web page” as is in the claimed present invention. (See base Claims 7, 11; emphasis added). Bates only discloses a method for the automated refreshing of a web page. Base Claims 7 and 11 recite this patentable distinction in the noted (emphasized) claim limitation. Furthermore, Claims 7 and 11 now include the limitation of periodic intervals defined with respect to the actual rate of change of the dynamic element with respect to other dynamic data. As the refresh rate of Bates is estimated based on the rate of change of dynamic elements, base Claims 7 and 11 are believed to be patentably distinguished from the cited art. Claims 8-10 are dependent on base Claim 7 and Claims 12-14 are dependent on base Claim 11 and thus inherit the claim limitations.

Neither Labounty nor Helbig disclose a method in which a scheduler periodically invokes an executable to generate a copy of the web page as claimed in base Claims 7 and 11. Nor do they disclose the use of generating a web page at defined intervals. Therefore dependent Claims 8-10 and 12-14 inheriting these claim limitations are not made obvious by Bates in view of Labounty nor Bates in view of Labounty in further view of Helbig. As such these rejections under § 103 are believed to be overcome and withdrawal of these rejections is respectfully requested.


CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If

the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

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